

**IN THE CLAIMS**

This listing of the claims replaces all prior versions of the claims in the application.

1-33. (canceled)

34. (currently amended): A nucleic acid molecule which encodes a fusion protein comprising:  
—— a substantially complete S domain of HBsAg; and  
—— a polypeptide comprising (a) amino acid residues 384 to 661 of an HCV-1 polypeptide; or (b) the corresponding residues of other HCV isolates; the amino acid sequence of SEQ ID NO:7 or (c) a sequence having at least about 90% sequence identity to (a) or (b) thereto, wherein said polypeptide protein comprises a native HCV epitope and is capable of eliciting an immunological response against HCV.

35-41. (canceled)

42. (currently amended): A vector comprising a nucleic acid molecule which encodes a fusion protein comprising:  
—— a substantially complete S domain of HBsAg; and  
—— a polypeptide comprising (a) amino acid residues 384 to 661 of an HCV-1 polypeptide; or (b) the corresponding residues of other HCV isolates; the amino acid sequence of SEQ ID NO:7 or (c) a sequence having at least about 90% sequence identity to (a) or (b) thereto, wherein said polypeptide protein comprises a native HCV epitope and is capable of eliciting an immunological response against HCV.

43. (canceled)

44. (canceled)

45. (previously presented): The vector of claim 42 comprising the nucleotide sequence of SEQ ID NO:6, or a nucleotide sequence having at least about 90% sequence identity to the sequence of SEQ ID NO:6, wherein said vector is capable of expressing a fusion protein that comprises a native HCV epitope and elicits an immunological response against HCV.

46-65. (canceled)

66. (currently amended): An immunogenic composition comprising a nucleic acid molecule which encodes a fusion protein comprising ~~a substantially complete S domain of HBsAg covalently linked to a polypeptide comprising (a) amino acid residues 384 to 661 of an HCV-1 polypeptide; or (b) the corresponding residues of other HCV isolates; the amino acid sequence of SEQ ID NO:7 or (e) a sequence having at least about 90% sequence identity to (a) or (b) thereto~~, wherein said ~~polypeptide~~ protein comprises a native HCV epitope and is capable of eliciting an immunological response against HCV.

67. (canceled)

68. (canceled)

69. (previously presented): The immunogenic composition of claim 66, wherein said nucleic acid molecule comprises the nucleotide sequence displayed in SEQ ID NO:6, or a nucleotide sequence having at least about 90% sequence identity to the sequence of SEQ ID NO:6, wherein said nucleic acid molecule is capable of expressing a fusion protein that comprises a native HCV epitope and elicits an immunological response against HCV.

70-76. (canceled)

77. (currently amended): A cell line that expresses a virus-like particle comprising a first HBsAg and a chimeric antigen, wherein the chimeric antigen comprises ~~a second HBsAg which is linked to an immunogenic polypeptide~~ the amino acid sequence of SEQ ID NO:7 or a sequence having at least about 90% sequence identity thereto, and wherein the first and the second HBsAg each comprise a substantially complete S domain, ~~wherein said immunogenic polypeptide comprises (a) amino acid residues 384 to 661 of an HCV 1 polypeptide; or (b) the corresponding residues of other HCV isolates; or (c) a sequence having at least about 90% sequence identity to (a) or (b), wherein said polypeptide antigen~~ comprises a native HCV epitope and is capable of eliciting an immunological response against HCV.

78-79. (canceled)

80. (withdrawn -- currently amended): A method of producing the cell line of claim 77, the method comprising:

transfecting a cell with a vector that expresses a virus-like particle comprising a first HBsAg and a chimeric antigen, wherein the chimeric antigen comprises ~~a second HBsAg which is linked to an immunogenic polypeptide~~ the amino acid sequence of SEQ ID NO:7 or an amino acid sequence having at least about 90% sequence identity thereto, and wherein the first and the second HBsAg each comprise a substantially complete S domain and said antigen comprises a native HCV epitope and is capable of eliciting an immunological response against HCV; and

culturing the cell to produce a cell line that expresses the virus-like particles.

81. (withdrawn): The method of claim 80, wherein the vector is a plasmid vector.

82. (withdrawn): The method of claim 81, wherein the plasmid vector is pCMV-II-E2661-sAg (SEQ ID NO:6).

83. (withdrawn -- currently amended): A method of producing a virus-like particle comprising the steps of:

culturing a cell of the cell line of claim 77 in a culture medium, ~~whereby the cell expresses a virus-like particle comprising a first HBsAg and a chimeric antigen, wherein the chimeric antigen comprises a second HBsAg which is linked to an HCV immunogenic polypeptide, and wherein the first and the second HBsAg each comprise a substantially complete S domain; and~~

isolating the virus-like particle from the culture medium.

84. (withdrawn): The method of claim 83, wherein the cell is a CHO cell or a COS cell.

85. (currently amended): A vector comprising a nucleic acid sequence which encodes a first HBsAg and a nucleic acid sequence which encodes a fusion protein comprising the amino acid sequence of SEQ ID NO:7 or a sequence having at least about 90% sequence identity thereto ~~a second HBsAg which is linked to an immunogenic polypeptide~~, wherein the first and the second HBsAg each comprise a substantially complete S domain; ~~and wherein the immunogenic polypeptide comprises (a) amino acid residues 384 to 661 of an HCV-1 polypeptide; or (b) the corresponding residues of other HCV isolates; or (c) a sequence having at least about 90% sequence identity to (a) or (b), wherein said polypeptide protein comprises a native HCV epitope and is capable of eliciting an immunological response against HCV.~~

86. (previously presented): The vector of claim 85, wherein an internal ribosomal entry site (IRES) precedes the nucleic acid sequence encoding the fusion protein.

87. (canceled)

88. (previously presented): The vector of claim 85 comprising the nucleotide sequence of SEQ ID NO:6, or a nucleotide sequence having at least about 90% sequence identity to the sequence of SEQ ID NO:6, wherein said vector is capable of expressing a fusion protein that comprises a native HCV epitope and elicits an immunological response against HCV.

89. (previously presented): The nucleic acid molecule of claim 34 encoding a fusion protein comprising the amino acid sequence of SEQ ID NO:7.

90. (previously presented): The vector of claim 42, wherein the nucleic acid molecule encodes a fusion protein comprising the amino acid sequence of SEQ ID NO:7.

91. (previously presented): The immunogenic composition of claim 66, wherein the nucleic acid molecule encodes a fusion protein comprising the amino acid sequence of SEQ ID NO:7.